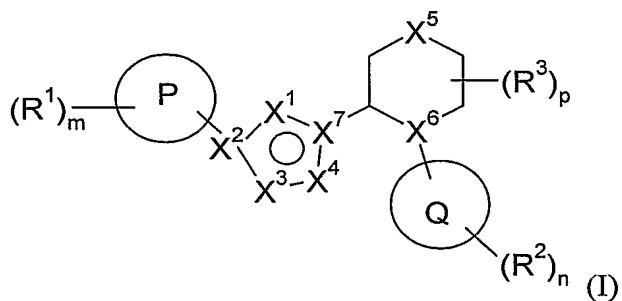


## CLAIMS

1. A compound according to formula I



5 wherein

P is selected from aryl and heteroaryl;

$R^1$  is attached to P via a carbon atom on ring P and is selected from the group consisting of hydroxy, halo, nitro,  $C_{1-6}$ alkylhalo,  $OC_{1-6}$ alkylhalo,  $C_{1-6}$ alkyl,  $OC_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $OC_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl,  $OC_{2-6}$ alkynyl,  $C_{0-6}$ alkyl $C_{3-6}$ cycloalkyl,  $OC_{0-6}$ alkyl $C_{3-6}$ cycloalkyl,  $C_{0-6}$ alkylaryl,  $OC_{0-6}$ alkylaryl, CHO,  $(CO)R^5$ ,  $O(CO)R^5$ ,  $O(CO)OR^5$ ,  $O(CNR^5)OR^5$ ,  $C_{1-6}$ alkyl $OR^5$ ,  $OC_{2-6}$ alkyl $OR^5$ ,  $C_{1-6}$ alkyl $(CO)R^5$ ,  $OC_{1-6}$ alkyl $(CO)R^5$ ,  $C_{0-6}$ alkyl $CO_2R^5$ ,  $OC_{1-6}$ alkyl $CO_2R^5$ ,  $C_{0-6}$ alkylcyano,  $OC_{2-6}$ alkylcyano,  $C_{0-6}$ alkyl $NR^5R^6$ ,  $OC_{2-6}$ alkyl $NR^5R^6$ ,  $C_{1-6}$ alkyl $(CO)NR^5R^6$ ,  $OC_{1-6}$ alkyl $(CO)NR^5R^6$ ,  $C_{0-6}$ alkyl $NR^5(CO)R^6$ ,  $OC_{2-6}$ alkyl $NR^5(CO)R^6$ ,  $C_{0-6}$ alkyl $NR^5(CO)NR^5R^6$ ,  $C_{0-6}$ alkyl $SR^5$ ,  $OC_{2-6}$ alkyl $SR^5$ ,  $C_{0-6}$ alkyl $(SO)R^5$ ,  $OC_{2-6}$ alkyl $(SO)R^5$ ,  $C_{0-6}$ alkyl $SO_2R^5$ ,  $OC_{2-6}$ alkyl $SO_2R^5$ ,  $C_{0-6}$ alkyl $(SO_2)NR^5R^6$ ,  $OC_{2-6}$ alkyl $(SO_2)NR^5R^6$ ,  $C_{0-6}$ alkyl $NR^5(SO_2)R^6$ ,  $OC_{2-6}$ alkyl $NR^5(SO_2)R^6$ ,  $C_{0-6}$ alkyl $NR^5(SO_2)NR^5R^6$ ,  $OC_{2-6}$ alkyl $NR^5(SO_2)NR^5R^6$ ,  $(CO)NR^5R^6$ ,  $O(CO)NR^5R^6$ ,  $NR^5OR^6$ ,  $C_{0-6}$ alkyl $NR^5(CO)OR^6$ ,  $OC_{2-6}$ alkyl $NR^5(CO)OR^6$ ,  $SO_3R^5$  and a 5- or 6-membered ring containing atoms independently selected from the group consisting of C, N, O and S;

20  $X^1$  is selected from the group consisting of: N,  $NR^4$  and  $CR^4$ ;

$X^2$  is selected from the group consisting of: C and N;

$X^3$  is selected from the group consisting of:  $CR^4$ , N and O;

$X^4$  is selected from the group consisting of:  $CR^4$ , N,  $NR^4$  and O;

$X^5$  is selected from the group consisting of: a bond,  $CR^4R^4$ ,  $NR^4$ , O, S,  $SO$  and  $SO_2$ ;

$X^6$  is selected from the group consisting of:  $CR^4$  and N;

$X^7$  is selected from the group consisting of: C and N;

$R^4$  is independently selected from a group consisting of hydrogen, hydroxy,  $C_{1-6}$ alkyl,  $C_{0-6}$ alkylcyano, oxo,  $=NR^5$ ,  $=NOR^5$ ,  $C_{1-4}$ alkylhalo, halo,  $C_{3-7}$ cycloalkyl,  $O(CO)C_{1-4}$ alkyl,  $C_{1-4}$ alkyl(SO) $C_{0-4}$ alkyl,  $C_{1-4}$ alkyl(SO<sub>2</sub>) $C_{0-4}$ alkyl, (SO) $C_{0-4}$ alkyl, (SO<sub>2</sub>) $C_{0-4}$ alkyl,  $OC_{1-4}$ alkyl,  $C_{1-4}$ alkylOR<sup>5</sup> and  $C_{0-4}$ alkylNR<sup>5</sup>R<sup>6</sup>;

Q is selected the group consisting of heterocycloalkyl and heteroaryl;

$R^2$  and  $R^3$  are independently selected from the group consisting of: hydroxy,  $C_{0-6}$ alkylcyano, oxo,  $=NR^5$ ,  $=NOR^5$ ,  $C_{1-4}$ alkylhalo, halo,  $C_{1-6}$ alkyl,  $C_{3-6}$ cycloalkyl,  $C_{0-6}$ alkylaryl,  $C_{0-6}$ alkylheteroaryl,  $C_{1-6}$ alkylcycloalkyl,  $C_{0-6}$ alkylheterocycloalkyl,  $OC_{1-4}$ alkyl,  $OC_{0-6}$ alkylaryl,  $O(CO)C_{1-4}$ alkyl,  $(CO)OC_{1-4}$ alkyl,  $C_{0-4}$ alkyl(S) $C_{0-4}$ alkyl,  $C_{1-4}$ alkyl(SO) $C_{0-4}$ alkyl,  $C_{1-4}$ alkyl(SO<sub>2</sub>) $C_{0-4}$ alkyl, (SO) $C_{0-4}$ alkyl, (SO<sub>2</sub>) $C_{0-4}$ alkyl,  $C_{1-4}$ alkylOR<sup>5</sup>,  $C_{0-4}$ alkylNR<sup>5</sup>R<sup>6</sup> and a 5- or 6-membered ring containing atoms independently selected from C, N, O and S, which ring may optionally be fused with a 5- or 6-membered ring containing atoms independently selected from the group consisting of C, N and O and wherein said ring and said fused ring may be substituted by one or more A;

wherein any  $C_{1-6}$ alkyl, aryl, or heteroaryl defined under  $R^1$ ,  $R^2$  and  $R^3$  may be substituted by one or more A;

A is selected from the group consisting of: hydrogen, hydroxy, halo, nitro, oxo,  $C_{0-6}$ alkylcyano,  $C_{0-4}$ alkyl $C_{3-6}$ cycloalkyl,  $C_{1-6}$ alkyl,  $-OC_{1-6}$ alkyl,  $C_{1-6}$ alkylhalo,  $OC_{1-6}$ alkylhalo,  $C_{2-6}$ alkenyl,  $C_{0-3}$ alkylaryl,  $C_{0-6}$ alkylOR<sup>5</sup>,  $OC_{2-6}$ alkylOR<sup>5</sup>,  $C_{0-6}$ alkylSR<sup>5</sup>,  $OC_{2-6}$ alkylSR<sup>5</sup>,  $(CO)R^5$ ,  $O(CO)R^5$ ,  $OC_{2-6}$ alkylcyano,  $OC_{1-6}$ alkylCO<sub>2</sub>R<sup>5</sup>,  $O(CO)OR^5$ ,  $OC_{1-6}$ alkyl(CO)R<sup>5</sup>,  $C_{1-6}$ alkyl(CO)R<sup>5</sup>,  $NR^5OR^6$ ,  $C_{0-6}NR^5R^6$ ,  $OC_{2-6}$ alkylNR<sup>5</sup>R<sup>6</sup>,  $C_{0-6}$ alkyl(CO)NR<sup>5</sup>R<sup>6</sup>,  $OC_{1-6}$ alkyl(CO)NR<sup>5</sup>R<sup>6</sup>,  $OC_{2-6}$ alkylNR<sup>5</sup>(CO)R<sup>6</sup>,  $C_{0-6}$ alkylNR<sup>5</sup>(CO)R<sup>6</sup>,  $C_{0-6}$ alkylNR<sup>5</sup>(CO)NR<sup>5</sup>R<sup>6</sup>,  $O(CO)NR^5R^6$ ,  $C_{0-6}$ alkyl(SO<sub>2</sub>)NR<sup>5</sup>R<sup>6</sup>,  $OC_{2-6}$ alkyl(SO<sub>2</sub>)NR<sup>5</sup>R<sup>6</sup>,  $C_{0-6}$ alkylNR<sup>5</sup>(SO<sub>2</sub>)R<sup>6</sup>,  $OC_{2-6}$ alkylNR<sup>5</sup>(SO<sub>2</sub>)R<sup>6</sup>,  $SO_3R^5$ ,  $C_{1-6}$ alkylNR<sup>5</sup>(SO<sub>2</sub>)NR<sup>5</sup>R<sup>6</sup>,  $OC_{2-6}$ alkyl(SO<sub>2</sub>)R<sup>5</sup>,  $C_{0-6}$

$_6\text{alkyl}(\text{SO}_2)\text{R}^5$ ,  $\text{C}_{0-6}\text{alkyl}(\text{SO})\text{R}^5$ ,  $\text{OC}_{2-6}\text{alkyl}(\text{SO})\text{R}^5$  and a 5- or 6-membered ring containing atoms independently selected from the group consisting of C, N, O and S;

$\text{R}^5$  and  $\text{R}^6$  are independently selected from, H,  $\text{C}_{1-6}\text{alkyl}$ ,  $\text{C}_{3-7}\text{cycloalkyl}$  and aryl ;

m is selected from 0, 1, 2, 3 or 4;

5 n is selected from 0, 1, 2, 3 or 4;

p is selected from 0, 1, 2, 3 or 4; and

a salt or hydrate thereof,

with the proviso that the compound is not:

4,4'-(1,2-piperazinediyl)di-antipyrine;

10 4,4'-(1,2-piperazinediyl)di-antipyrine dihydrochloride; or

4,4'-(1,2-piperazinediyl)di-antipyrine dipicrate;

2. A compound according to claim 1 wherein m is selected from 1, 2, 3 or 4

3. A compound according to claim 1 wherein  $\text{X}^7$  is C.

15 4. A compound according to claim 1 wherein  $\text{X}^5$  is selected from the group consisting of  $\text{CR}^4\text{R}^{4'}$ ,  $\text{NR}^4$ , O, S, SO and  $\text{SO}_2$ .

5. A compound according to claim 1 wherein  $\text{X}^3$  is selected from the group consisting of N and O.

6. A compound according to claim 1 wherein P is aryl.

7. A compound according to claim 6 wherein P is phenyl.

20 8. A compound according to claim 7 wherein m is selected from the group consisting of 1 and 2.

9. A compound according to claim 1 wherein  $\text{R}^1$  is selected from the group consisting of: halo,  $\text{C}_{1-6}\text{alkylhalo}$ ,  $\text{OC}_{1-6}\text{alkylhalo}$ ,  $\text{C}_{1-6}\text{alkyl}$ ,  $\text{OC}_{1-6}\text{alkyl}$ ,  $\text{C}_{1-6}\text{alkylOR}^5$ ,  $\text{C}_{0-6}\text{alkylcyano}$ ,  $\text{C}_{0-6}\text{alkylNR}^5\text{R}^6$ .

10. A compound according to claim 9 wherein  $R^1$  is selected from the group consisting of: Cl, F, Me, OMe,  $CF_3$ ,  $OCF_3$ , and CN.

11. A compound according to claim 1 wherein  $X^2$  is C.

12. A compound according to claim 11 wherein  $X^1$  is N or  $CR^4$ .

5 13. A compound according to claim 12 wherein when  $X^3$  is O,  $X^4$  is N and when  $X^3$  is N,  $X^4$  is O.

14. A compound according to claim 1 wherein  $X^2$  is N.

15. A compound according to claim 14 wherein  $X^1$  is N.

16. A compound according to claim 15 wherein  $X^3$  is N and  $X^4$  is N or  $CR^4$ .

10 17. A compound according to claim 1 wherein  $X^6$  is N.

18. A compound according to claim 12 wherein  $X^5$  is selected from the group consisting of a bond,  $CR^4R^{4'}$ ,  $NR^4$  and O.

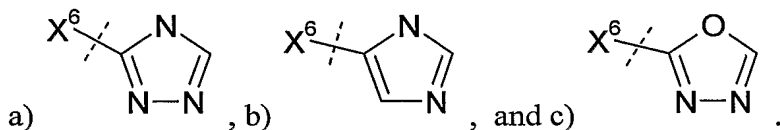
19. A compound according to claim 13 wherein  $X^5$  is selected from the group consisting of a bond, O and  $NR^4$ .

15 20. A compound according to claim 16 wherein  $X^5$  is selected from the group consisting of O and  $CR^4$ .

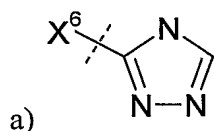
21. A compound according to claim 1 wherein  $R^4$  is selected from the group consisting of: hydrogen,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkylhalo and halo.

22. A compound according to claim 1 wherein Q is heteroaryl.

20 23. A compound according to claim 1 wherein Q is selected from the group consisting of:



24. A compound according to claim 23 wherein Q is



25. A compound according to claim 1 wherein R<sup>2</sup> and R<sup>3</sup> are independently selected from the group consisting of: C<sub>1-4</sub>alkylhalo, C<sub>1-6</sub>alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>0-6</sub>alkylaryl and C<sub>0-6</sub>alkylheteroaryl.

5 26. A compound according to claim 1 wherein A is selected from the group consisting of: hydrogen, hydroxyl, halo, C<sub>0-6</sub>alkylcyano, C<sub>1-6</sub>alkyl, -OC<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkylhalo, OC<sub>1-6</sub>alkylhalo.

27. A compound according to claim 1 selected from:

10 4-(5-{2-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-piperidin-1-yl}-4-methyl-4H [1,2,4]triazol-3-yl)-pyridine

3-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-4-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-morpholine

3-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-4-[5-(4-difluoromethoxy-phenyl)-4-methyl-4H-[1,2,4]triazol-3-yl]-morpholine

15 3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-morpholine

3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-[5-(4-difluoromethoxy-phenyl)-4-methyl-4H-[1,2,4]triazol-3-yl]-morpholine

20 3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-piperazine-1-carboxylic acid tert-butyl ester

2-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-1-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-piperazine

2-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-methyl-1-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-piperazine

3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-[5-(4-difluoromethoxy-phenyl)-4-methyl-4H-[1,2,4]triazol-3-yl]-piperazine-1-carboxylic acid tert-butyl ester

2-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-1-[5-(4-difluoromethoxy-phenyl)-4-methyl-4H-[1,2,4]triazol-3-yl]-piperazine

5 2-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-1-[5-(4-difluoromethoxy-phenyl)-4-methyl-4H-[1,2,4]triazol-3-yl]-4-methyl-piperazine

2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]-1-{5-[4-(difluoromethoxy)phenyl]-4-methyl-4H-1,2,4-triazol-3-yl}piperidine

10 4-(5-{2-[2-(3-chlorophenyl)-2H-tetrazol-5-yl]piperidin-1-yl}-4-methyl-4H-1,2,4-triazol-3-yl)pyridine

2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]-1-[5-(4-methoxyphenyl)-4-methyl-4H-1,2,4-triazol-3-yl]piperidine

[4-(5-{2-[2-(3-chlorophenyl)-2H-tetrazol-5-yl]piperidin-1-yl}-4-methyl-4H-1,2,4-triazol-3-yl)phenyl]dimethylamine

15 [4-(5-{2-[2-(3-Chloro-phenyl)-2H-tetrazol-5-yl]-piperidin-1-yl}-4-methyl-4H-[1,2,4]triazol-3-yl)-benzyl]-dimethyl-amine

{2-[4-(5-{2-[2-(3-Chloro-phenyl)-2H-tetrazol-5-yl]-piperidin-1-yl}-4-methyl-4H-[1,2,4]triazol-3-yl)-phenoxy]-ethyl}-dimethyl-amine

20 (R)-3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-morpholine

(S) 3-[3-(3-Chloro-phenyl)-[1,2,4]oxadiazol-5-yl]-4-(4-methyl-5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-morpholine

(R)-2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]-1-{5-[4-(difluoromethoxy)phenyl]-4-methyl-4H-1,2,4-triazol-3-yl}piperidine

25 (S)-2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]-1-{5-[4-(difluoromethoxy)phenyl]-4-methyl-4H-1,2,4-triazol-3-yl}piperidine

(R)-4-(5-{2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]piperidin-1-yl}-4-methyl-4H-1,2,4-triazol-3-yl)pyridine

(S)-4-(5-{2-[2-(3-Chlorophenyl)-2H-tetrazol-5-yl]piperidin-1-yl}-4-methyl-4H-1,2,4-triazol-3-yl)pyridine

5 4-[5-(5-{2-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-pyrrolidin-1-yl}-4-cyclopropyl-4H-[1,2,4]triazol-3-yl)-pyridin-2-yl]-morpholine,

4-[5-(5-{2-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-pyrrolidin-1-yl}-4-methyl-4H-[1,2,4]triazol-3-yl)-pyridin-2-yl]-morpholine,

3-(5-{2-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-pyrrolidin-1-yl}-4-methyl-4H-[1,2,4]triazol-3-yl)-pyridine,

10 4-(5-{2-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-pyrrolidin-1-yl}-4-cyclopropyl-4H-[1,2,4]triazol-3-yl)-pyridine,

3-[5-(3-Chloro-phenyl)-[1,2,4]oxadiazol-3-yl]-4-(5-pyridin-4-yl-4H-[1,2,4]triazol-3-yl)-morpholine,

15 3-[5-(3-chlorophenyl)isoxazol-3-yl]-4-(4-cyclopropyl-5-pyridin-3-yl-4H-1,2,4-triazol-3-yl)morpholine,

3-[5-(3-chlorophenyl)isoxazol-3-yl]-4-(4-cyclopropyl-5-pyridin-4-yl-4H-1,2,4-triazol-3-yl)morpholine,

3-[5-(3-chlorophenyl)isoxazol-3-yl]-4-(4-methyl-5-pyridin-3-yl-4H-1,2,4-triazol-3-yl)morpholine,

20 3-[5-(3-Chloro-phenyl)-isoxazol-3-yl]-4-[5-(6-methoxy-pyridin-3-yl)-4-methyl-4H-[1,2,4]triazol-3-yl]-morpholine,

3-[3-(3-chlorophenyl)-1,2,4-oxadiazol-5-yl]-4-[5-(2-methoxypyridin-4-yl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

25 3-[3-(3-chlorophenyl)-1,2,4-oxadiazol-5-yl]-4-[5-(2-methylpyridin-4-yl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

3-[3-(3-chlorophenyl)-1,2,4-oxadiazol-5-yl]-4-[5-(5-fluoropyridin-3-yl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

3-[5-(3-chlorophenyl)isoxazol-3-yl]-4-[5-(5-fluoropyridin-3-yl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

5 3-[3-(3-chlorophenyl)-1,2,4-oxadiazol-5-yl]-4-(4-methyl-5-pyridin-2-yl-4H-1,2,4-triazol-3-yl)morpholine,

4-[5-(5-fluoropyridin-3-yl)-4-methyl-4H-1,2,4-triazol-3-yl]-3-[3-(3-iodophenyl)-1,2,4-oxadiazol-5-yl]morpholine,

10 3-[3-(3-iodophenyl)-1,2,4-oxadiazol-5-yl]-4-(4-methyl-5-pyridin-4-yl-4H-1,2,4-triazol-3-yl)morpholine,

3-[5-(3-chlorophenyl)isoxazol-3-yl]-4-[5-(2-methylpyridin-4-yl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

3-[2-(3-chlorophenyl)-2H-tetrazol-5-yl]-4-(4-methyl-5-pyridin-3-yl-4H-1,2,4-triazol-3-yl)morpholine,

15 3-[2-(3-chlorophenyl)-2H-tetrazol-5-yl]-4-[5-(3,5-difluorophenyl)-4-methyl-4H-1,2,4-triazol-3-yl]morpholine,

3-(5-{2-[5-(3-chlorophenyl)isoxazol-3-yl]pyrrolidin-1-yl}-4-cyclopropyl-4H-1,2,4-triazol-3-yl)pyridine, and

20 4-(5-{2-[5-(3-chlorophenyl)isoxazol-3-yl]pyrrolidin-1-yl}-4-methyl-4H-1,2,4-triazol-3-yl)pyridine.

28. A pharmaceutical composition comprising as active ingredient a therapeutically effective amount of the compound according to any one of claims 1 to 26, in association with one or more pharmaceutically acceptable diluent, excipients and/or inert carrier.

29. The pharmaceutical composition according to claim 28, for use in the treatment of  
25 mGluR 5 mediated disorders.

30. The compound according to any one of claims 1 to 27, for use in therapy.



31. The compound according to any one of claims 1 to 27, for use in treatment of mGluR 5 mediated disorders.

32. Use of the compound according to any one of claims 1 to 27, in the manufacture of a medicament for the treatment of mGluR 5 mediated disorders.

5 33. A method of treatment of mGluR 5 mediated disorders, comprising administering to a mammal, including man in need of such treatment, a therapeutically effective amount of the compound according to any one of claims 1 to 27.

34. The method according to claim 33, for use in treatment of neurological disorders.

35. The method according to claim 33, for use in treatment of psychiatric disorders.

10 36. The method according to claim 33, for use in treatment of chronic and acute pain disorders.

37. The method according to claim 33, for use in treatment of gastrointestinal disorders.

38. A method for inhibiting activation of mGluR 5 receptors, comprising treating a cell containing said receptor with an effective amount of the compound according to claim 1.